

REMARKS

Upon entry of this amendment, Claims 1 and 6 will be amended. Claims 1-6 remain pending in the application, with Claims 1, 3 and 6 being independent claims. Claims 1 and 2 are again rejected under 35 U.S.C. § 102(e) as being anticipated by Wong (U.S. Patent No. 6,615,026 B1). Claims 3-5 are again rejected under 35 U.S.C. § 102(e) as being anticipated by Tran (U.S. Patent No. 6,184,833 B1). Claim 6 is again rejected under 35 U.S.C. § 103(a) as being unpatentable over Tran in view of Wong.

Entry of this Amendment is proper under 37 C.F.R. § 116 because the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issues that would require further consideration and/or search as the amendments and arguments presented merely amplify issues previously discussed throughout prosecution; and (c) place the application in better form for an appeal, should an appeal be necessary. Applicants respectfully request entry of the Amendment.

Claims 1 and 6 have each been amended to recite, in part, a portable communication terminal including a plurality of dipole antennas adapted to simultaneously perform a same communication; a plurality of balance/unbalance transformers (BALUNs), each BALUN being coupled to a single dipole antenna of the plurality of dipole antennas; and phase control means for feeding power to each of the dipole antennas and for controlling respective phases of powers to be fed to the dipole antennas, wherein a difference of phases of powers to be fed to the dipole antennas is controlled such that electromagnetic fields in the vicinity of a user's head cancel each other.

Wong describes a portable telephone with an antenna structure that directs radiated energy away from the user's head. The telephone employs an internal transmission antenna, and a metallic surface is interposed between the antenna and the user's head. The metallic surface is placed apart from the radiating element of the transmission antenna by one-quarter of the effective wavelength, so as to maximize the reflection of energy away from the user's head.

Tran describes a dual strip antenna that includes first and second conductive strips, each made from a conductive material. The first and second strips are separated by a dielectric substrate having a predetermined thickness. The first strip is electrically connected to the second strip at one end. A coaxial signal feed is coupled to the dual strip antenna. The dual strip antenna provides an increase in bandwidth over conventional microstrip patch antennas, which is made possible by operating the dual strip antenna as an open-ended parallel plate waveguide having asymmetrical conductor terminations. The operation of the dual strip antenna as an open-ended parallel waveguide is achieved by selecting appropriate dimensions for the lengths and widths of the first and second strips.

With respect to Claims 1, 2 and 6, Wong, Tran, or any combination thereof, fails to teach or reasonably suggest the use of a balance/unbalance transformer (BALUN) with their respective antennas, or phase control means for feeding power to each of the dipole antennas and for controlling respective phases of powers to be fed to the dipole antennas, wherein a difference of phases of powers to be fed to the dipole antennas is controlled such that electromagnetic fields in the vicinity of a user's head cancel each other.

Accordingly, amended Claim 1 and Claim 2 are allowable over Wong, and amended Claim 6 is allowable over Tran and Wong.

Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 1 and 2 under 35 U.S.C. § 102(e) as being anticipated by Wong, and the rejection of Claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Tran in view of Wong.

Regarding Claims 3 and 4, Applicants respectfully do not agree with the Examiner. The Examiner states that Tran discloses, in col. 6, line 61, to col. 7, line 5, a dual strip antenna (dipole antenna pattern) arranged on a printed circuit board surface. The Examiner also states that Tran discloses that the antenna may be micro-etched onto one side of a printed circuit board (second surface), in col. 6, lines 65-68, and that the antenna may be mounted opposite to a mounted speaker in the device, in col. 5, lines 45-55. The Examiner further states that he "reads a PCB as any structure that supports said speaker (a first surface), and notes that mounting an antenna behind a speaker would be on the opposite side of the PCB that supports and electrically couples said speaker." The Examiner "notes that any supporting surface for the dual strip antenna (such as the 'ground plane' noted in col. 6, lines 60-65) could be considered an antenna board" as used in Claim 4.

Tran describes a conventional microstrip antenna 200, where the antenna 200 includes a microstrip element 204, a dielectric substrate 208, a ground plane 212 and a feed point 216. As Tran plainly states from col. 6, lines 65, to col. 7, line 2, the **"microstrip element can be manufactured using a variety of known techniques including being photo etched on one side of a printed circuit board, while a ground plane is photo etched on the other side, or another layer, of the printed circuit board"** (emphasis added).

In contrast, Claim 3 recites a portable communication terminal including "a printed circuit board having a first surface and an opposing second surface, the printed circuit board being included within the portable communication terminal; **a speaker mounted upon the first surface of the printed circuit board; and a dipole antenna arranged on the second surface of the printed circuit board.**" (emphasis added).

Tran fails to teach the features set forth in Claim 3 because different parts of the Tran antenna 200, relied upon by the Examiner, e.g., the microstrip element 204 and the ground plane 212, are mounted on opposite sides of the printed circuit board described by Tran. Irrespective of where any speaker suggested by Tran is mounted in association with a printed circuit board, Claim 3 is allowable because Tran would fail to anticipate Claim 3.

While not conceding the patentability of the dependent claims, *per se*, Claims 4 and 5 are also allowable for at least the above reasons.

Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 3-5 under 35 U.S.C. § 102(e) as being anticipated by Tran.

Applicants respectfully submit that the proposed amendments made herein properly respond to the outstanding Final Rejection and represent a *bona fide* effort to satisfactorily conclude the prosecution of this application. Care has been exercised to insure that no new matter has been introduced and that no new issues have been raised that would require further consideration or search. It is felt that no inordinate amount of time will be required on the part of the Examiner to review and consider this amendment. In the event that the application is not allowed, it is requested that this amendment be entered for purposes of appeal.

Accordingly, all of the claims pending in the Application, namely, Claims 1-6, are believed to be in condition for allowance. Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicants' attorney at the number given below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul J. Farrell", written over the typed name.

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